Taper turning device

Version 1.0

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TH40xx 3440934

TH42xx 3440942

TH46xx 3440946

TH56xx 3440956

TH66xx 3440958

1 Optional Taper turning device

1.1 How it works

The bearing block of the cross slide spindle on the rear side on the bed slide is replaced by a movable bearing block of the taper turning device. With the aid of a guide rail, the now movable bearing block of the cross slide spindle is moved along a certain distance on the guide rail in the clamped state of the taper turning device on the bed track.

1.2 Technical specification

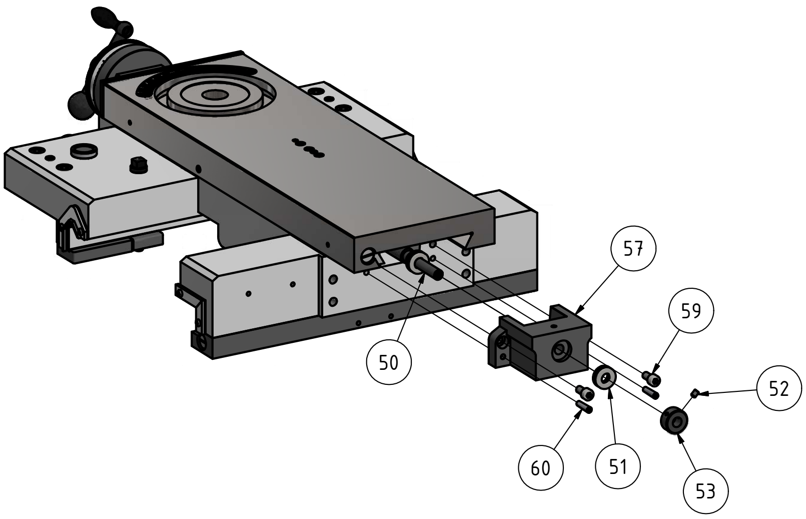
Adjustable angle	± 8°
Guide rail - stroke	455 mm
Net weight	43 kg

1.3 Installation

1.3.1 Disassembly of the spindle bearing block

➜ Remove the rear splashboard on the lathe to make it easier to disassemble and assemble the taper turning device.

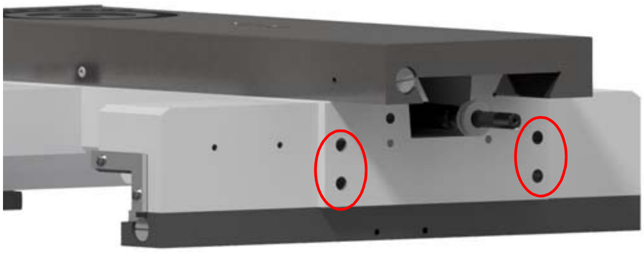
➜ Loosen the grub screw (52); remove the nut (53); pull out the taper pins (60); remove the cap screws (59) and finally remove the bearing bracket (57) and the axial ball bearing (51). The nut and the axial ball bearing are needed again when assembling the taper turning device.



Img. 1-1: Cross slide with spindle Bearing block

1.3.2 Mounting the taper turning device on the bed slide

- ➔ Remove the Phillips screw 6 (figure 2) and the sheet metal cover 21 (figure 4); loosen the Allen screw 42 (figure 3), remove the sliding block 22 (figure 4), the end block 4 (figure 2) and the Allen screw 1.
- ➔ As shown in figure 3, fix the cross slide spindle 50, the axial ball bearing 51 and the nut 53 on the end block 4 (figure 2), adjust the axial play of the cross slide spindle 50 (figure 3), fix the nut 53 with the grub screw 52, mount the end block 4 (figure 2) in the sliding block 22 (figure 4) with the hexagon socket screw 1.
- ➔ Fit the remaining part of the taper turning device into the screw holes on the bed slide using the cap screws 8 and the washers 9 (Figure 2). Make sure that the cylindrical part of the pivot 23 (figure 4) is inserted into the bore of the sliding block 22.



Img. 1-2: Screw holes on the bed slide

- ➔ Mount one end of the tie rod 15 on the connecting block 29 with the cap screw 30 and washer 31 (figure 4) and mount the other end and the pressure block 14 (figure 3) on the flat guide rail of the bed with the cap screw 12 and washer 13. Tighten the cap screw 12 to fix the tie rod 15 relative to the bed.
- ➔ Attach the dial gauge as shown in figure 5. Move the carriage to the left or right and align the top of the guide rail 19 to ≤ 0.05 mm (Figure 4). Drill the position hole Ø 8 in the bed slide 62 with the electric hand drill and fit the spring cylinder pin 7 (Figure 2).
- ➔ Turn the cross slide spindle 50 in figure 3 to move it axially and at the same time hit the top of the sliding block 22 with a rubber mallet (figure 4). When the guide screw is free, the sliding block 22 and the pivot 23 (figure 4) are fixed with the grub screw 42 (figure 3) (make sure that the grub screw 42 does not press the pivot 23 too tightly).
- ➔ As shown in figure 2, mount the sheet metal cover 21 (figure 4) using the Phillips screw 6 and loosen the cap screw 12 (figure 3).
- ➔ Mount the splashback in the same place as it was originally to complete the entire installation process.

Figure 2

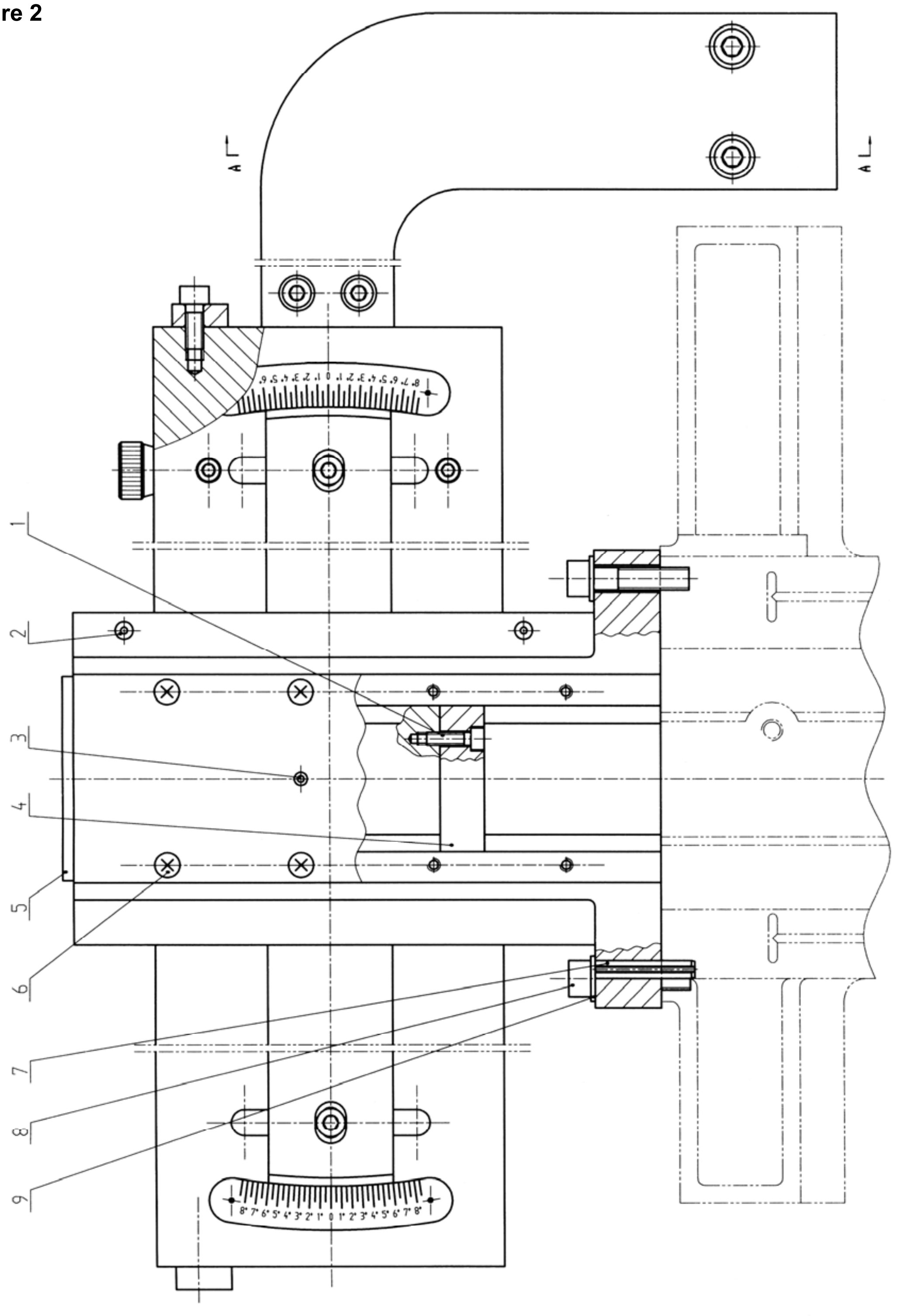


Figure 3

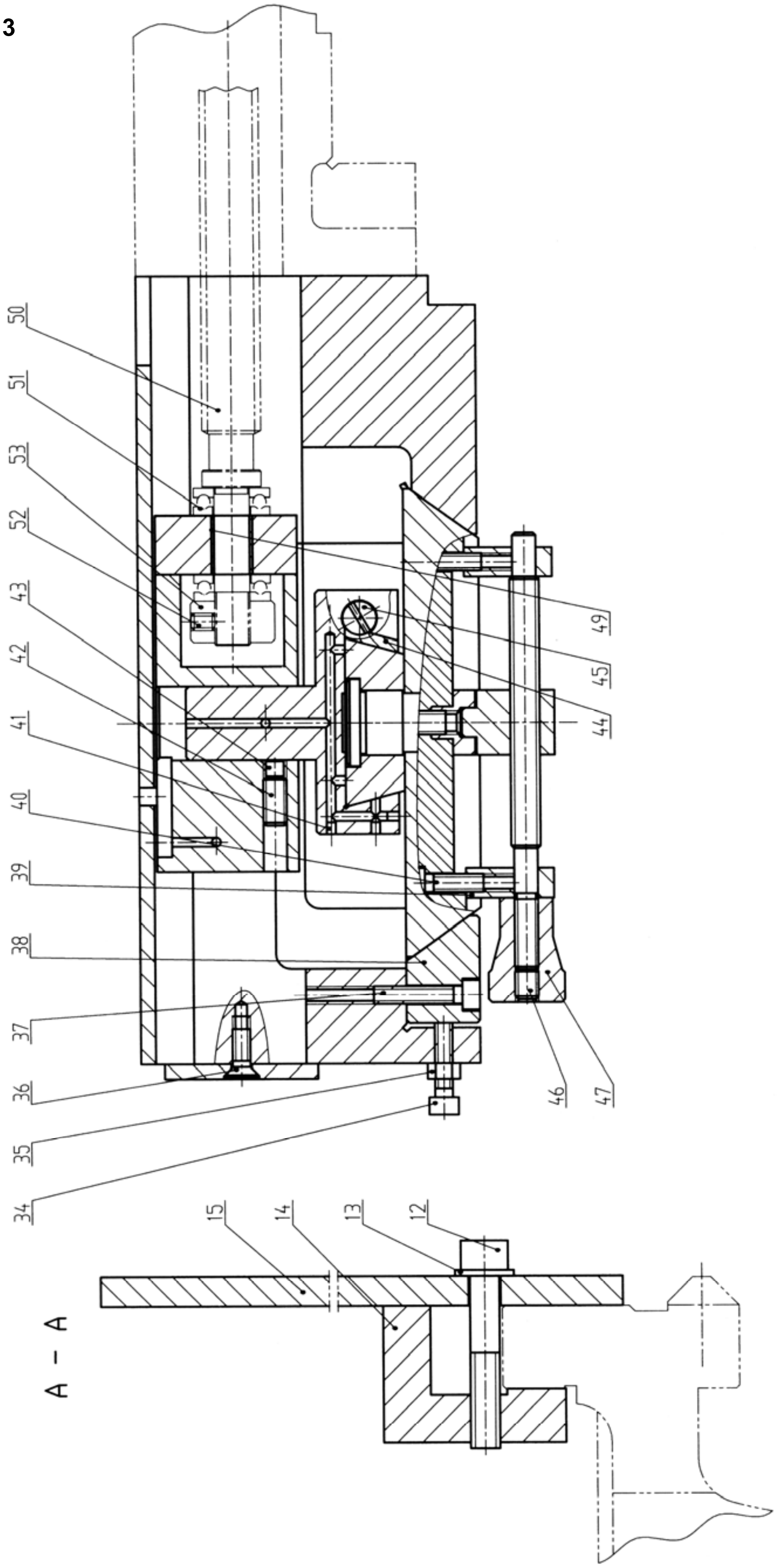


Figure 4

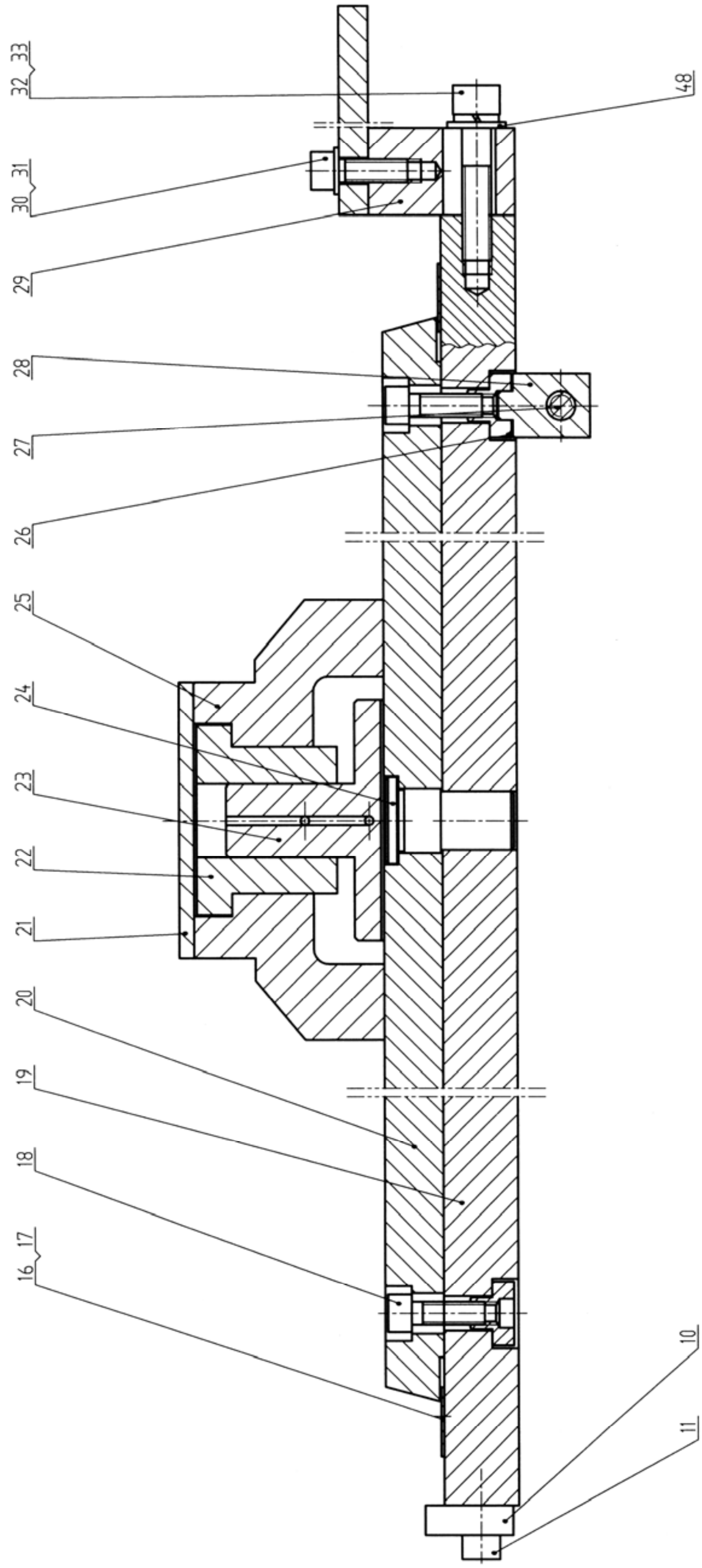
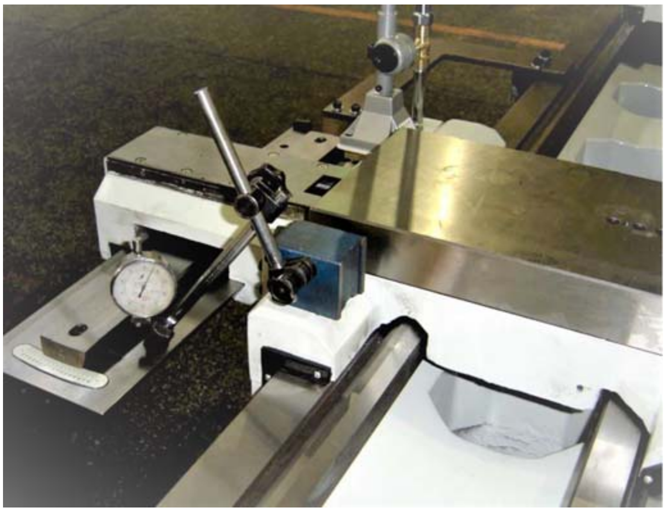


Figure 5



1.4 Mode of operation

- ➜ Move the bed slide in front of the tapered surface to be turned and tighten the cap screw 12 in figure 3 to lock the tie rod 15 in figure 3 firmly onto the bed.
- ➜ Loosen the Allen screws 18 in figure 4 (one at each end), turn the handle 47 in figure 3 to set the desired taper, then secure the Allen screws 18 in figure 4 (one at each end).
- ➜ When the bed slide is running in the longitudinal direction, the facing spindle 50 and the lateral sliding plate are moved by the pivot 23 and the sliding block 22 in Figure 4 to allow taper turning.
- ➜ When the taper turning device is not in use, loosen the cap screws 18 in Figure 4 (one at each end), turn the handle 47 in Figure 3 to move the profiling plate 20 to the "zero" position, then secure the cap screws 18 in Figure 4 (one at each end), loosen the cap screw 12 in Figure 3 to return to all other normal turning operations.

1.5 Teileliste - Parts list

Pos.	Bezeichnung	Description	Menge Qty.	Grösse Size	Referenz Reference	Artikelnummer Item no.
1	Innensechskantschraube	Socket Cap Screw	2	M6×20	GB70-85	
2	Öler	Press-Fit Oil Cup	2	D=8	GB1155-89	
3	Öler	Press-Fit Oil Cup	1	D=6	GB1155-89	
4	Endblock (für C6241, C6246H, C6251A, C6256A)	End Block (for C6241, C6246H, C6251A, C6256A)	1		C6241-115001	
4	Endblock (für C6266A)	End Block (for C6266A)	1		C6266A-17-01	
5	Anschlag	Stopper	1		C6241-115002	
6	Senkkopfschraube mit Kreuzschlitz	Countersunk screw with cross recess	8	M6×16	GB819-85	
7	Federstift	Spring Cylindrical Pin	2	8×45	GB879-86	
8	Innensechskantschraube	Socket Cap Screw	4	M10×45	GB70-85	
9	Scheibe	Flat Washer	4	d1=10 zinc-plating	GB97.1-85	
10	Anschlag	Stopper	2		C6241-115003	
11	Innensechskantschraube	Socket Cap Screw	2	M8×20	GB70-85	
12	Innensechskantschraube	Socket Cap Screw	2	M10×60	GB70-85	
13	Scheibe	Flat Washer	2	d1=10 zinc-plating	GB97.1-85	
14	Pressblock (für C6241, C6246H, C6266A)	Pressed Block (for C6241, C6246H, C6266A)	1		C6241-115033	
14	Pressblock (für C6251A, C6256A)	Pressed Block (for C6251A, C6256A)	1		C6251A-17-01	
15	Zugstange	Pull Rod	1		C6241-115032	
16	Nägel für Schildertafeln	Nails for Sign Board	4	2×6	GB827-86	
17	Hinweisschild	Sign Board	2		C6241-115009	
18	Innensechskantschraube	Socket Cap Screw	2	M8×25	GB70-85	
19	Unterteil Führungsschiene	Lower part of guide rail	1		C6241-115034	
20	Oberteil Führungsschiene	Upper part of guide rail	1		C6241-115012	
21	Blechdeckel	Plate Cover	1		C6241-115013	
22	Gleitblock	Slide Block	1		C6241-115014	
23	Drehzapfen	Pivot	1		C6241-115015	
24	Lage Achse	Position Axle	1		C6241-115016	
25	Hauptstütze	Main Support	1		C6241-115017	
26	Mobiler Block	Mobile Block	2		C6241-115018	
27	Einstellschraube	Adjustment Screw	1		C6241-115019	
28	Einstellmutter	Adjustment Nut	1		C6241-115020	
29	Anschlussblock (für C6241, C6246H, C6251A, C6256A)	Connection Block (for C6241, C6246H, C6251A, C6256A)	1		C6241-115031	
29	Anschlussblock (für C6266A)	Connection Block (for C6266A)	1		C6266A-17-02	
30	Innensechskantschraube	Socket Cap Screw	2	M8×25	GB70-85	
31		Flat Washer	2	d1=8	GB97.1-85	
32	Innensechskantschraube	Socket Cap Screw	2	M10×50	GB70-85	
33	Federscheibe	Spring Washer	2	10	GB93-86	
34	Innensechskantschraube	Socket Cap Screw	3	M6×25	GB70-85	
35	Sechskantmutter - Güteklasse A	Hexagon Nut – Grade A	3	M6 zinc plating	GB6170-86	
36	Senkkopfschraube mit Kreuzschlitz	Countersunk screw with cross recess	2	M6×16	GB819-85	
37	Innensechskantschraube	Socket Cap Screw	3	M6×30	GB70-85	
38	Keil	Wedge	1		C6241-115024	
39	Einstellung Unterstützer	Adjustment Supporter	2		C6241-115025	
40	Innensechskantschraube	Socket Cap Screw	2	M6×20	GB70-85	
41	Block Stift	Block Pin	3		C6241-115026	
42	Gewindestift mit Innensechskant	Hexagon socket set screw	1	M8×16	GB77-85	
43	Kupfer Unterlegscheibe	Copper Washer	1		C6241-115027	
44	Eingelegter Streifen	Inlaid Strip	1		C6241-115028	
45	Druckschraube	Press Screw	2		C6241-115029	
46	Gewindestift mit Innensechskant	Hexagon socket set screw	1	M8×10	GB77-85	
47	Griff	Handle	1		C6241-115030	
48	Scheibe	Flat Washer	2	d1=10 zinc plating	GB97.1-85	
49	Gleitlager	Oil-Free Lubrication Bearing	1	1218	SF-1	
50	Spindel Planschlitten	Cross slide spindle	1	already installed in machine	RUN6141-103021	
51	Axial-Kugellager	Thrust Ball Bearing	2	51101 already installed in machine	GB/T 301-1995	
52	Gewindestift mit Innensechskant	Hexagon socket set screw	1	M6×8	GB80-85	
53	Mutter	Nut	1		RUN6246-103007-1	